

FIG. 1

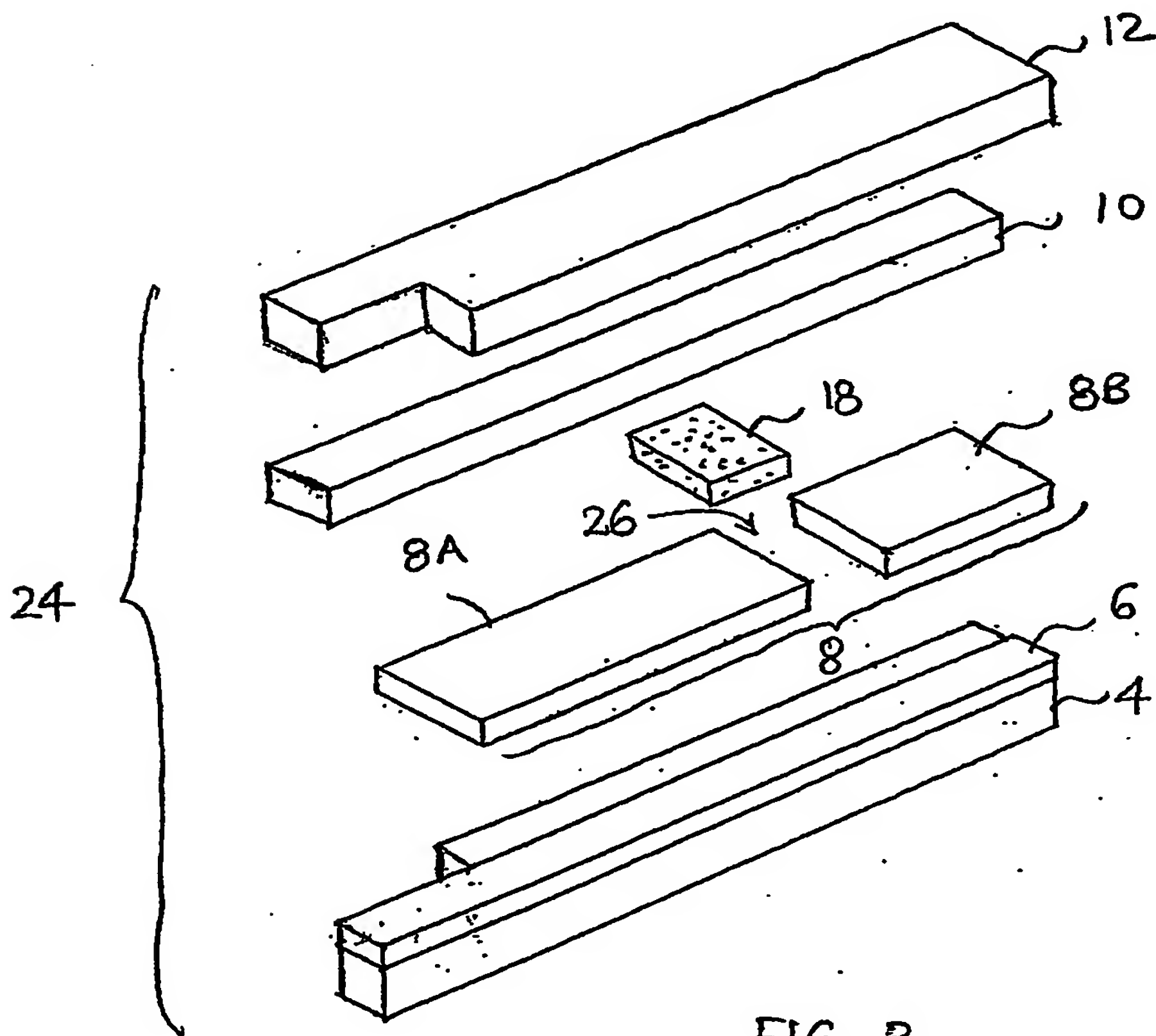


FIG. 3

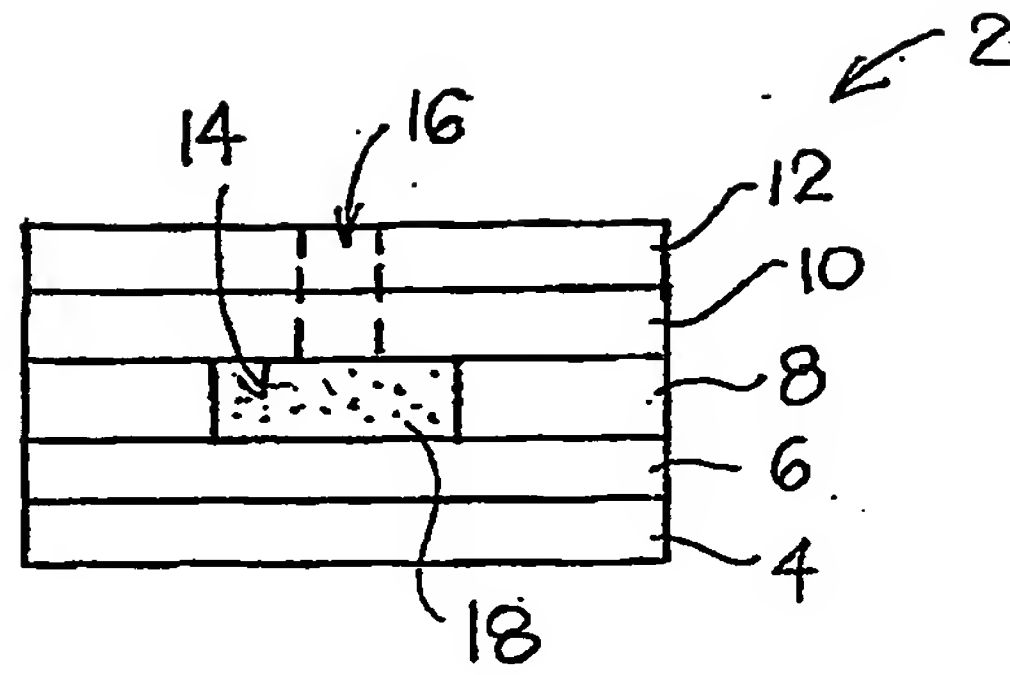


FIG. 2A

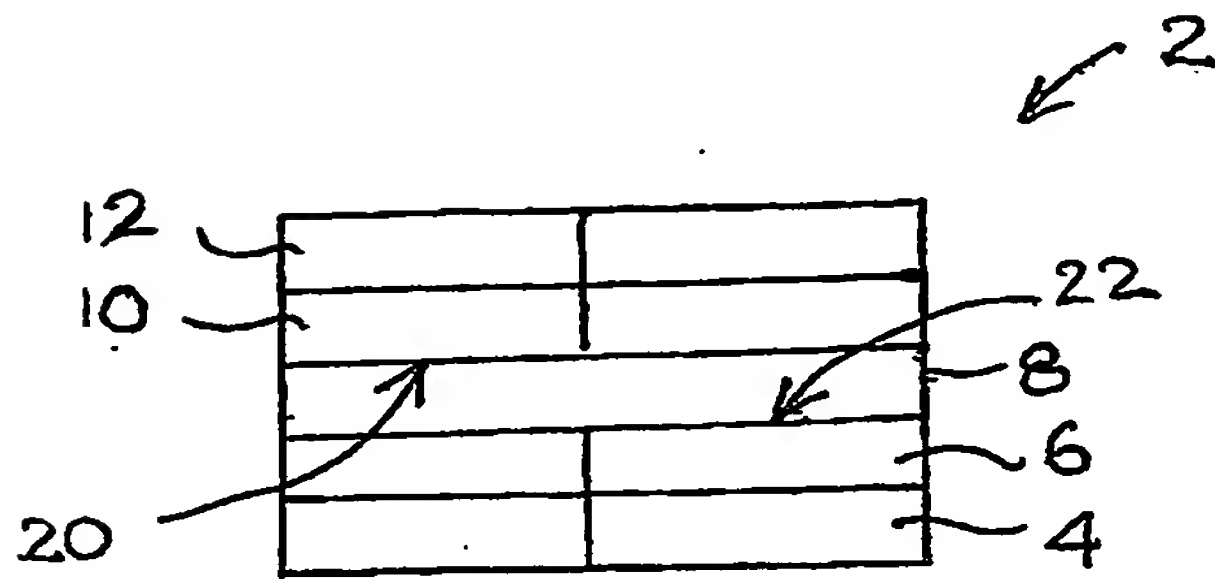


FIG. 2B

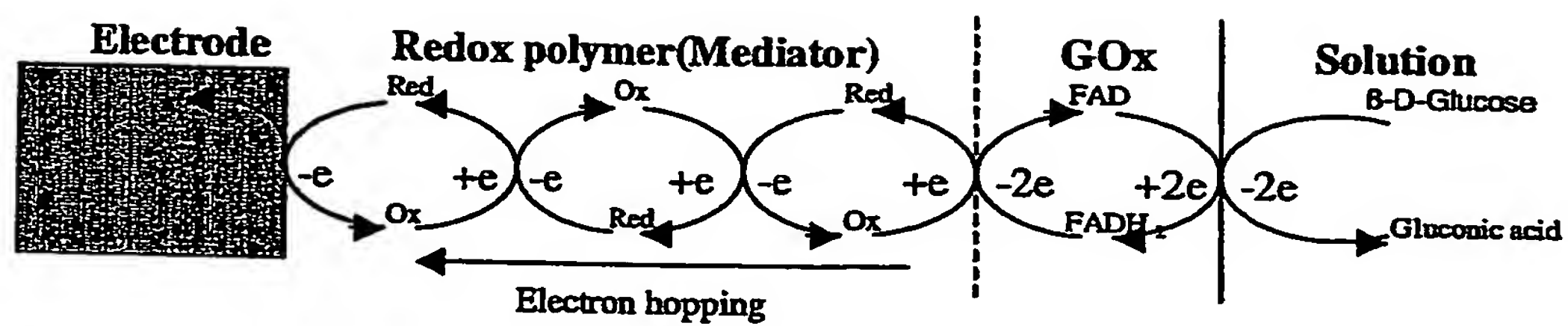


Figure 4. Illustration of redox polymer mediated biosensing process.

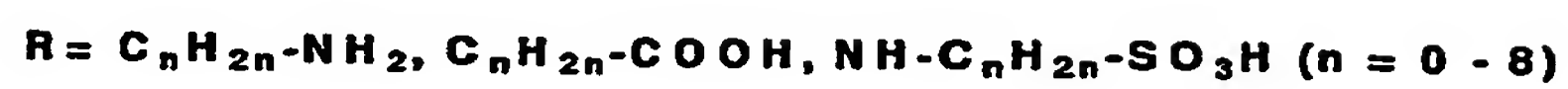
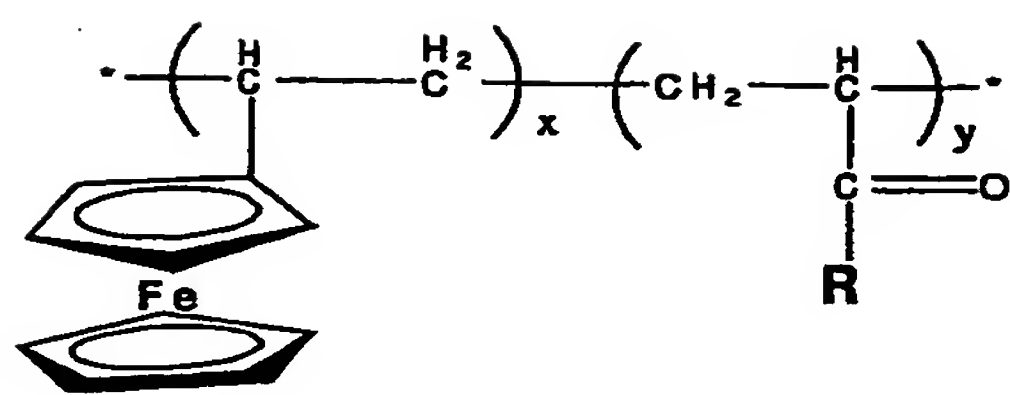
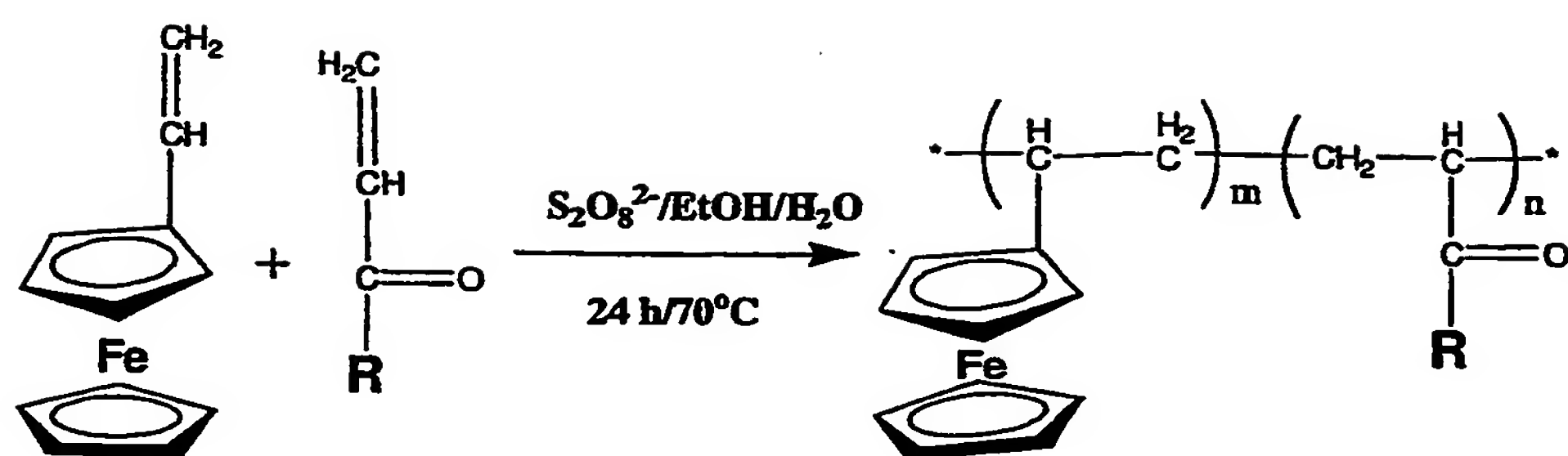


Figure 5. Structure of water-soluble and cross-linkable ferrocenyl redox polymer.



$\text{R} = \text{C}_n\text{H}_{2n}\text{-NH}_2, \text{C}_n\text{H}_{2n}\text{-COOH}, \text{NH-C}_n\text{H}_{2n}\text{-SO}_3\text{H} \text{ (n = 0 - 8)}$

Figure 6. Polymerization mechanism of the redox polymer

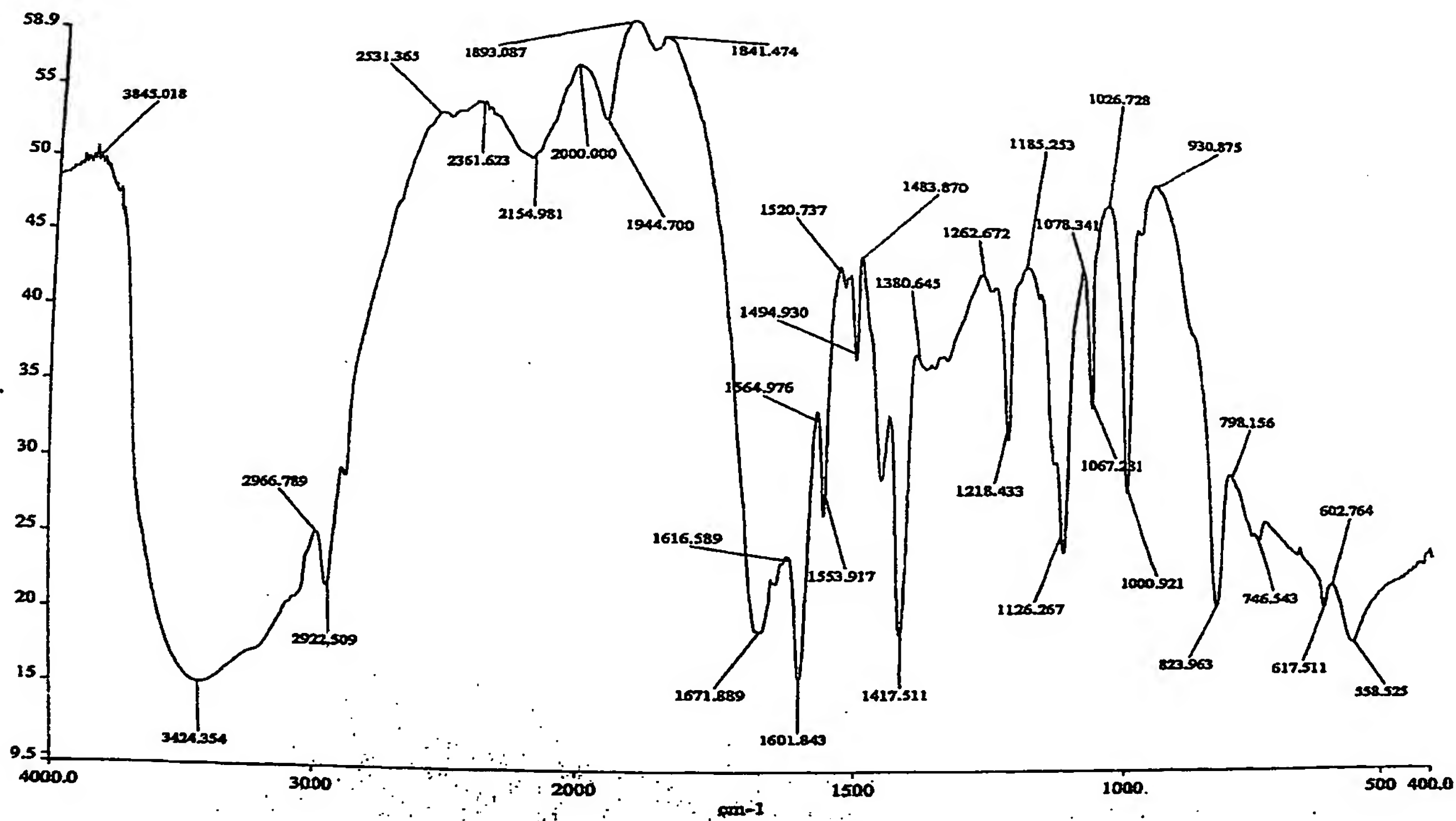


FIGURE 7. FT-IR Spectrum of PAA-VFc and PAAS-VFc redox polymer

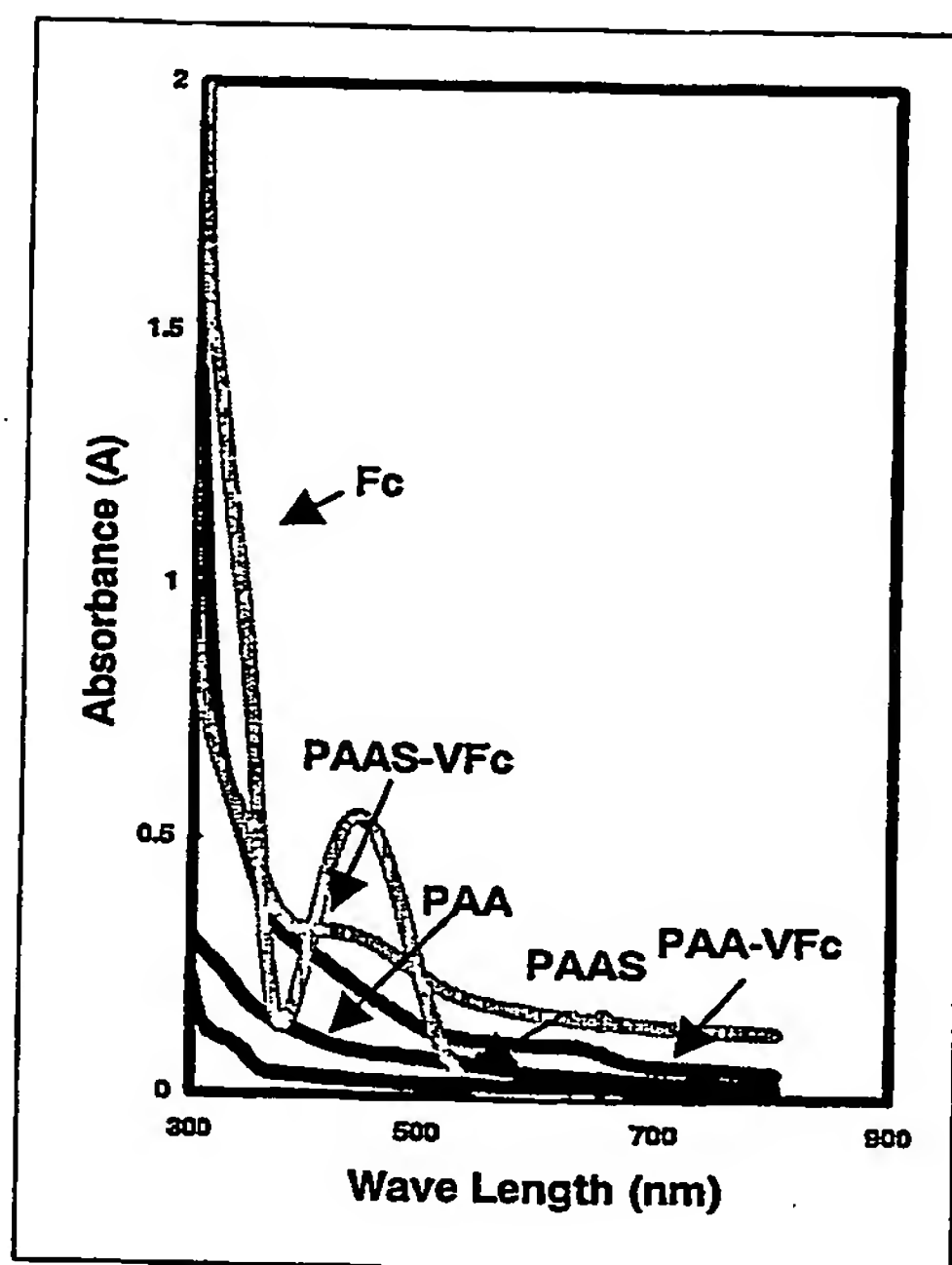


FIGURE 8. UV-visible spectra of Fc, PAA PAAS and their VFc copolymers.

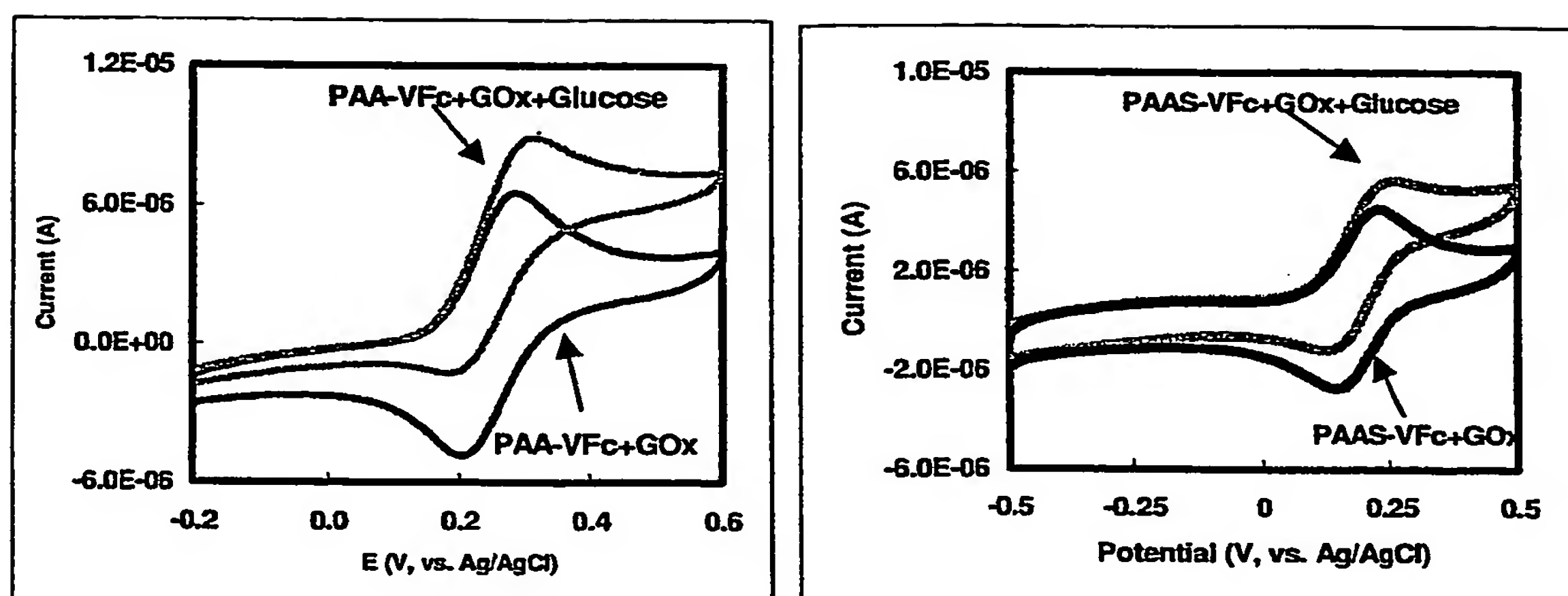


Figure 9. Cyclic voltammograms of redox polymers in various systems.

Phosphate-buffered saline, potential scan rate = 100 mV/s

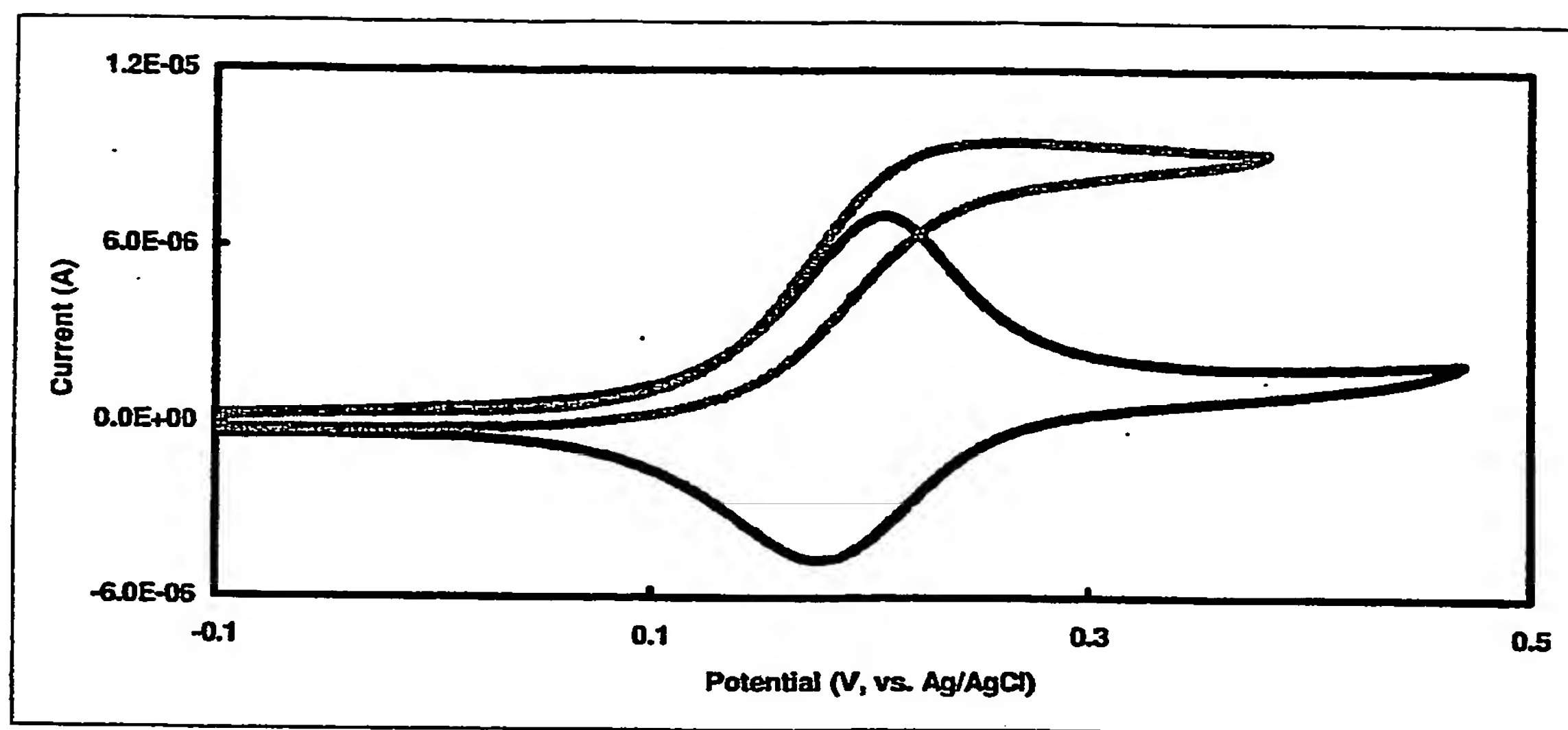


Figure 10. Cyclic voltammogram of cross-linked PAA-VFc-GOx-BSA film on gold electrode.

PBS, potential scan rate 50 mV/s.

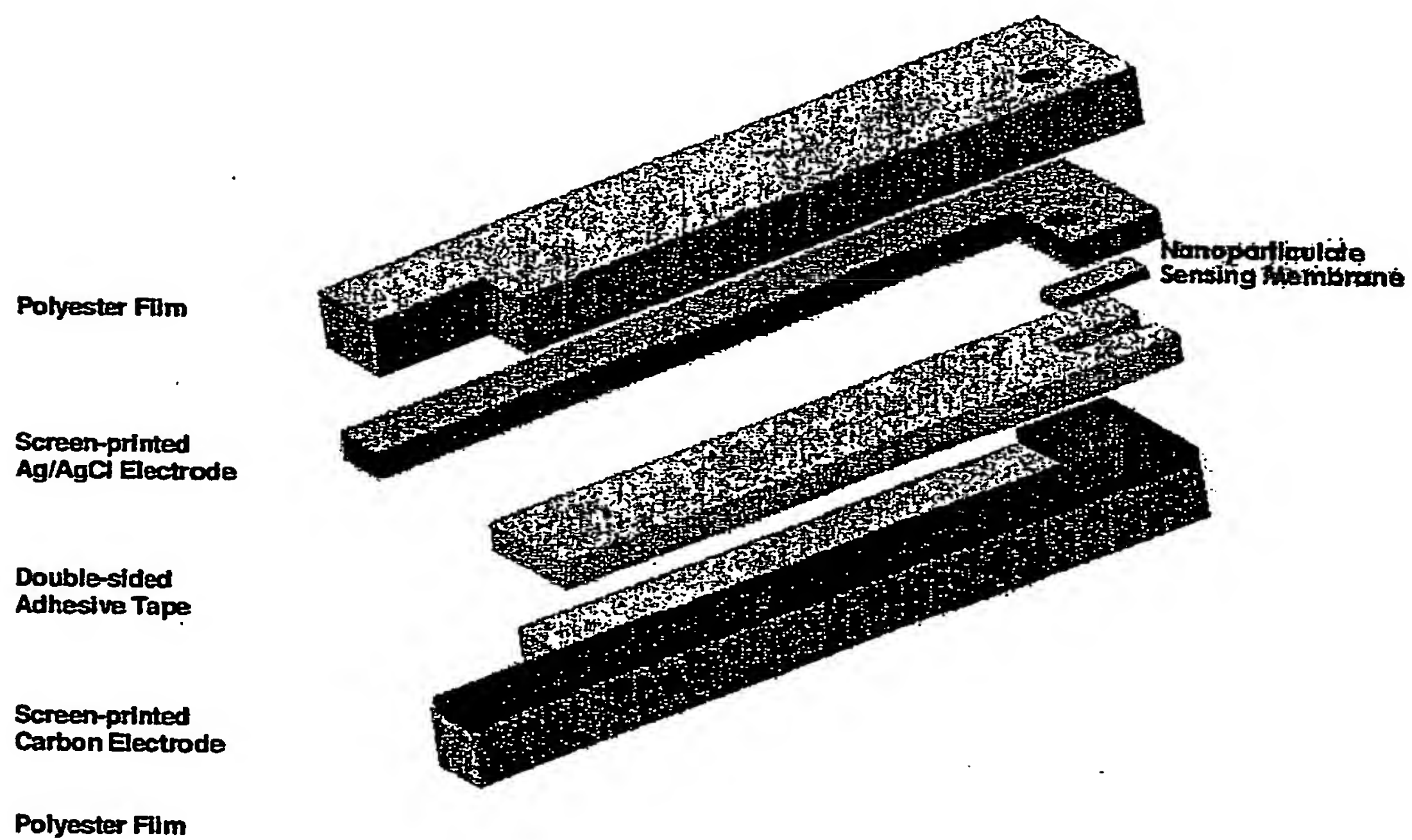


Figure 11

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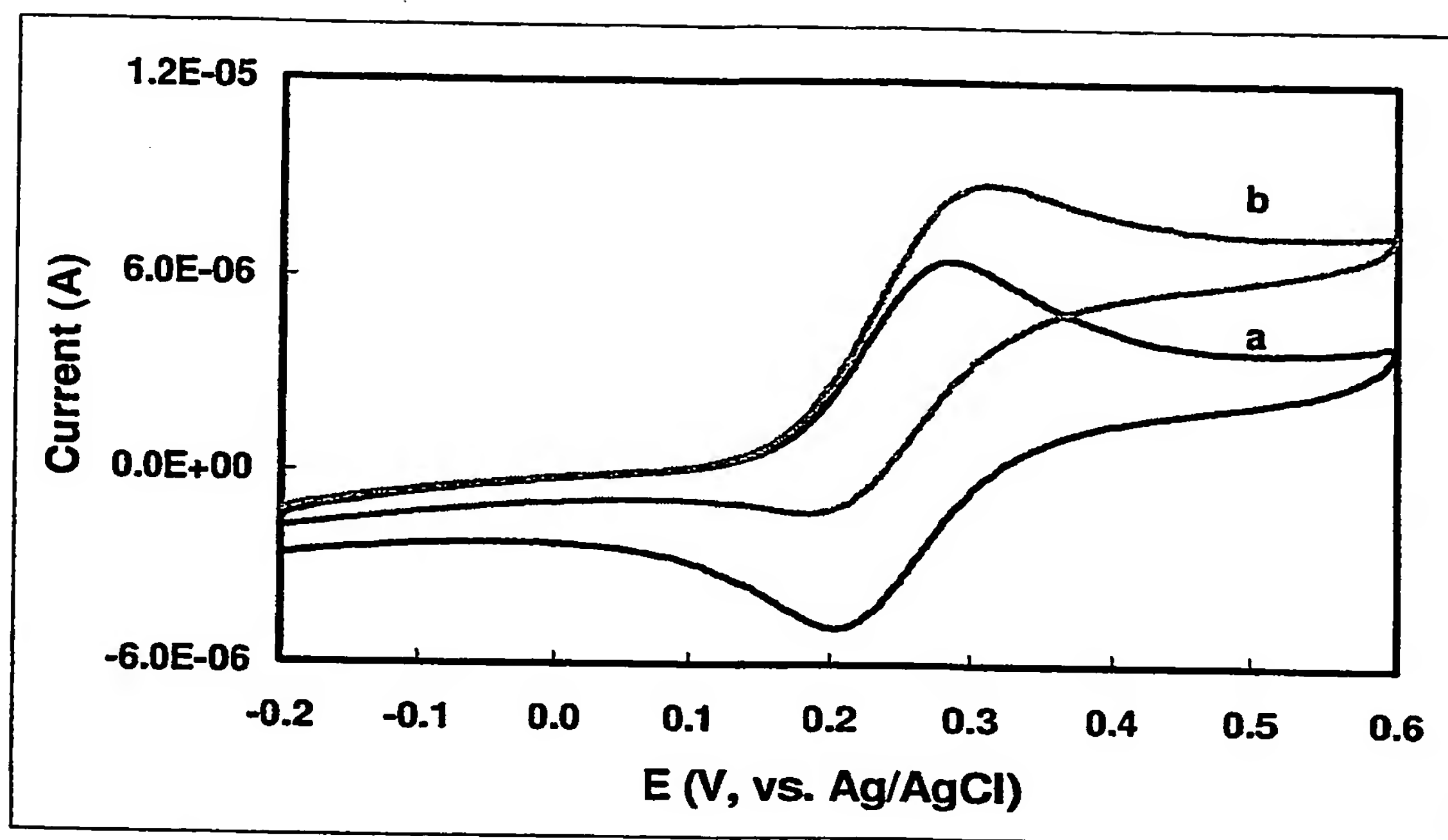


Figure 12

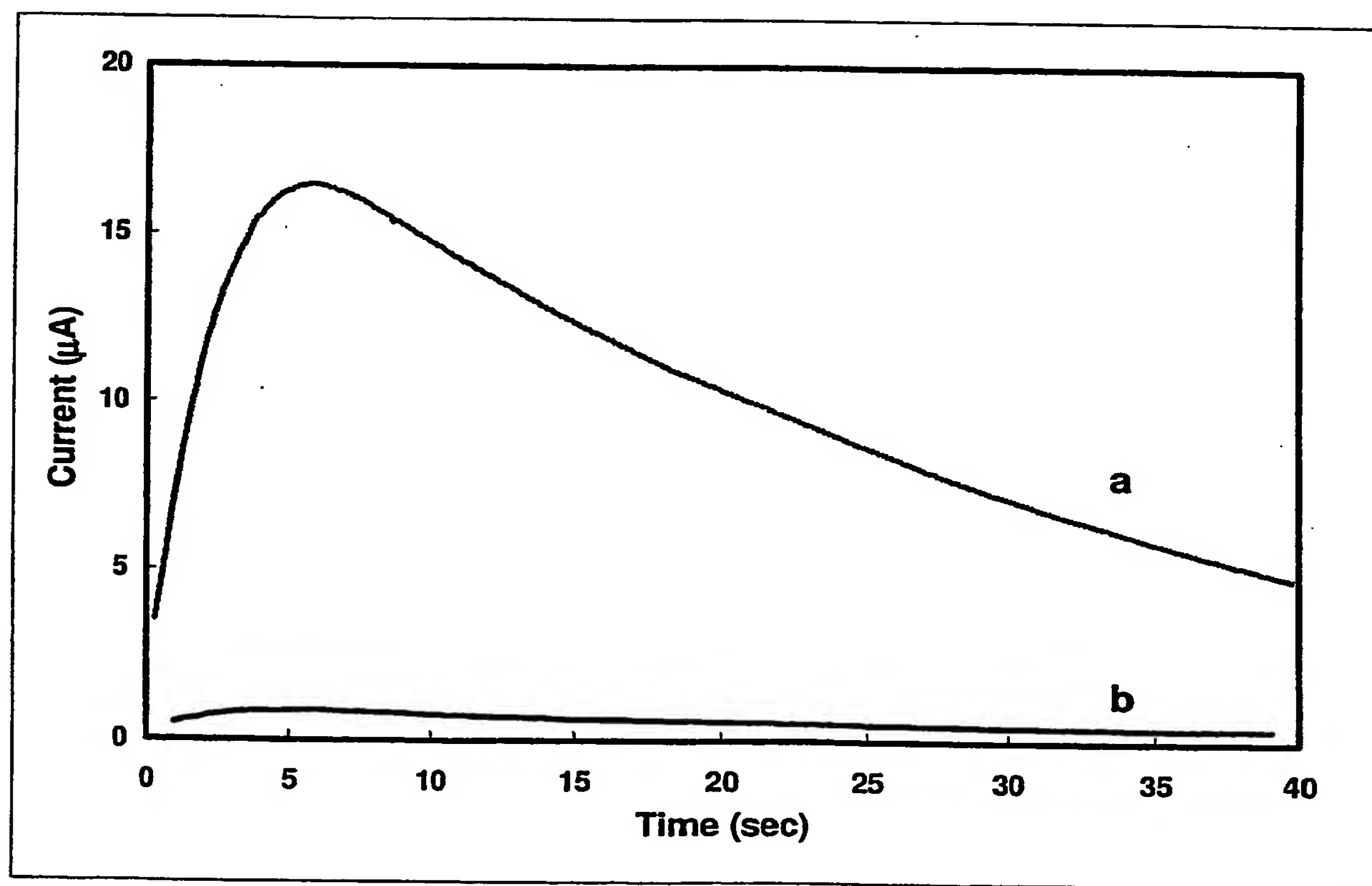


Figure 13

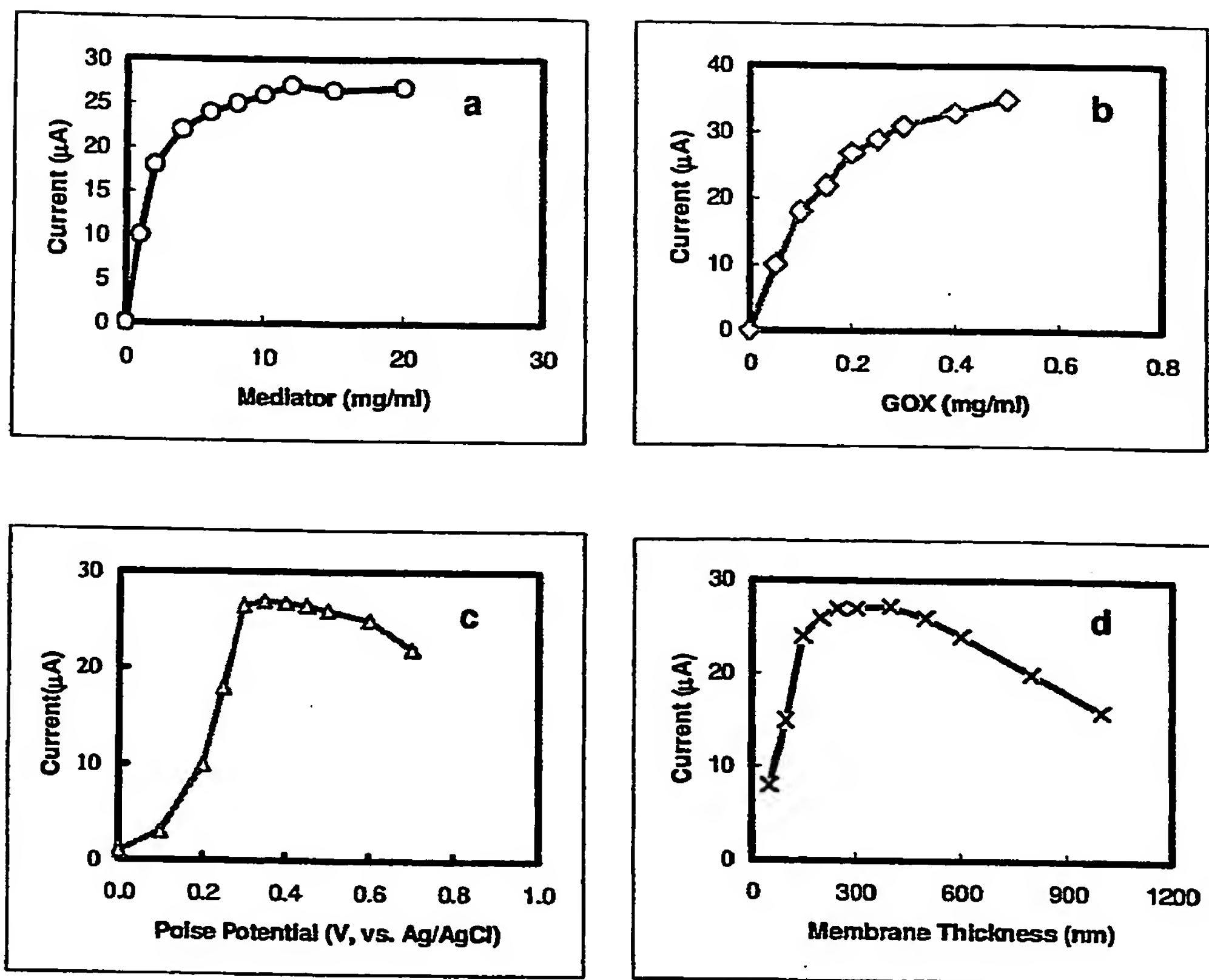


Figure 14

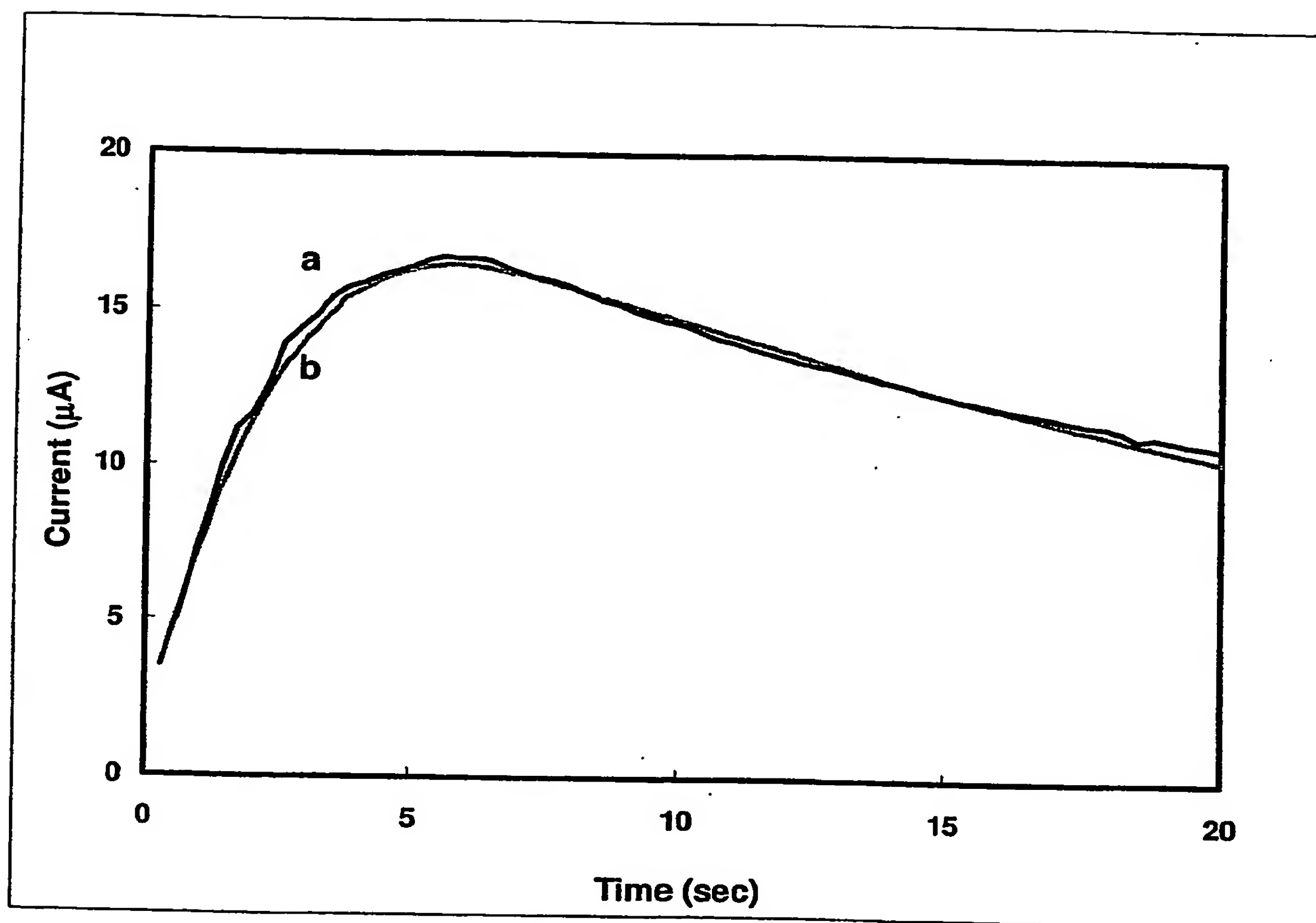


Figure 15

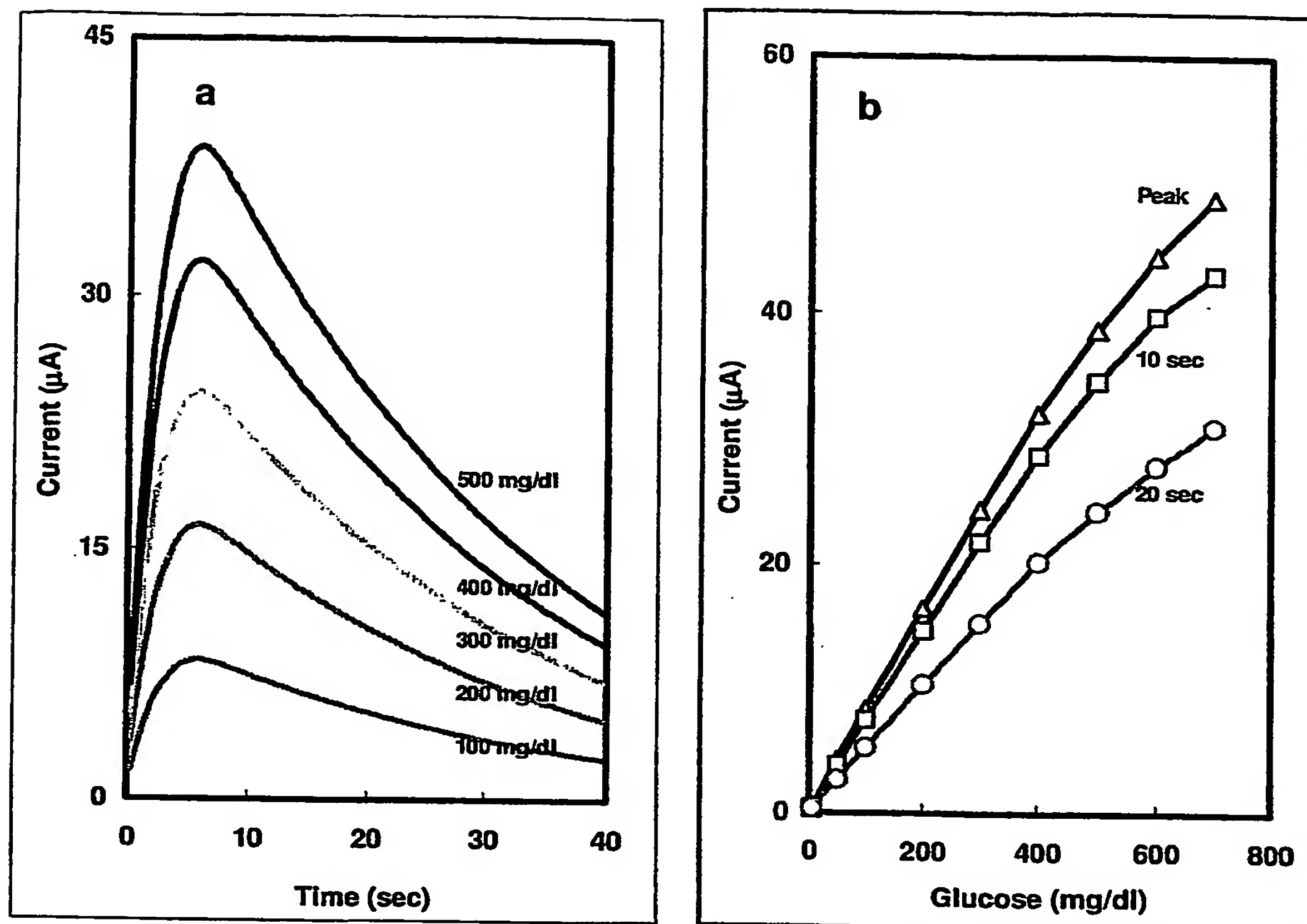


Figure 16